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TWIN CITIES

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September 6, 1973

N73-30307

Unclas
00965

Defense Supply Agency
DCAFD
Federal Building
Fort Snelling, Minnesota 55111

Attn: Russell L. Peterson

Enclosed herewith is the Type 1 report for ERTS project #SR-283 (control
NAS5-21801) for the period of July 1 through August 31, 1973.

Sincerely,

Dwight Brown
Project Coordinator

DB:jp
Encl.

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(E73-10965) LAND USE MANAGEMENT IN
MINNESOTA Progress Report, 1 Jul. - 31
Aug. 1973 (Minnesota State Planning
Agency, St. Paul.) 9 p HC \$3.00

CSCL 08B G3/13

TYPE I PROGRESS REPORT

July 1 - August 31, 1973

- a. Land Use Management in Minnesota #283.
- b. Joseph E. Sizer (ST-360).
- c. There have been no changes in the rate of receipt of standing order materials and retrospective requests.
- d. This project is focused on evaluating the ability of ERTS-1 imagery to update and refine the detail of land use information in the Minnesota Land Management Information System. Work in this reporting period has been directed toward defining the capabilities of the ERTS-1 system to provide information about surface water and wetland resources; testing and evaluating data input and output procedures for Itasca County and Metropolitan Twin Cities test areas, and meeting with administrators and resource information users from the Minnesota Department of Natural Resources (DNR) to identify their information needs.

Some phases of the wetland and water classification from ERTS-1 imagery will be completed in the next reporting interval. Evaluation of ERTS imagery for surface water inventory, one of DNR's stated basic needs, will be completed in December.

Because of different physical characteristics some lakes can be consistently singled out as being different from nearby lakes. Also, some lakes undergo significant changes in area and shape as seen on ERTS-1 imagery. Not all of these changes are related to the dynamics or physical characteristics of the lakes. Some appear to be produced by either seasonal variations in the lake surroundings or inconsistent image quality. This problem will be carefully examined in the next reporting interval.

A full scale systems test for Itasca County is nearly complete. Two townships were selected and entered in the MLMIS data system. Although baseline information in the system does not use the same variables and operational definitions, computer maps of several kinds of information, some over 10 years old, were drawn for comparison with maps based on ERTS-1 information. A series of maps for one of these townships is appended to this report.

The Twin Cities Metropolitan test area is scheduled for completion in December. Initial interpretation will be completed by October at which time maps will be produced and circulated and ground checked. This effort is a complete reinterpretation and not based on the test work reported in the six month Type II report for the period of January 1 - June 30, 1973. The new interpretation includes the entire seven county Metropolitan area and is utilizing a variety of recently acquired images.

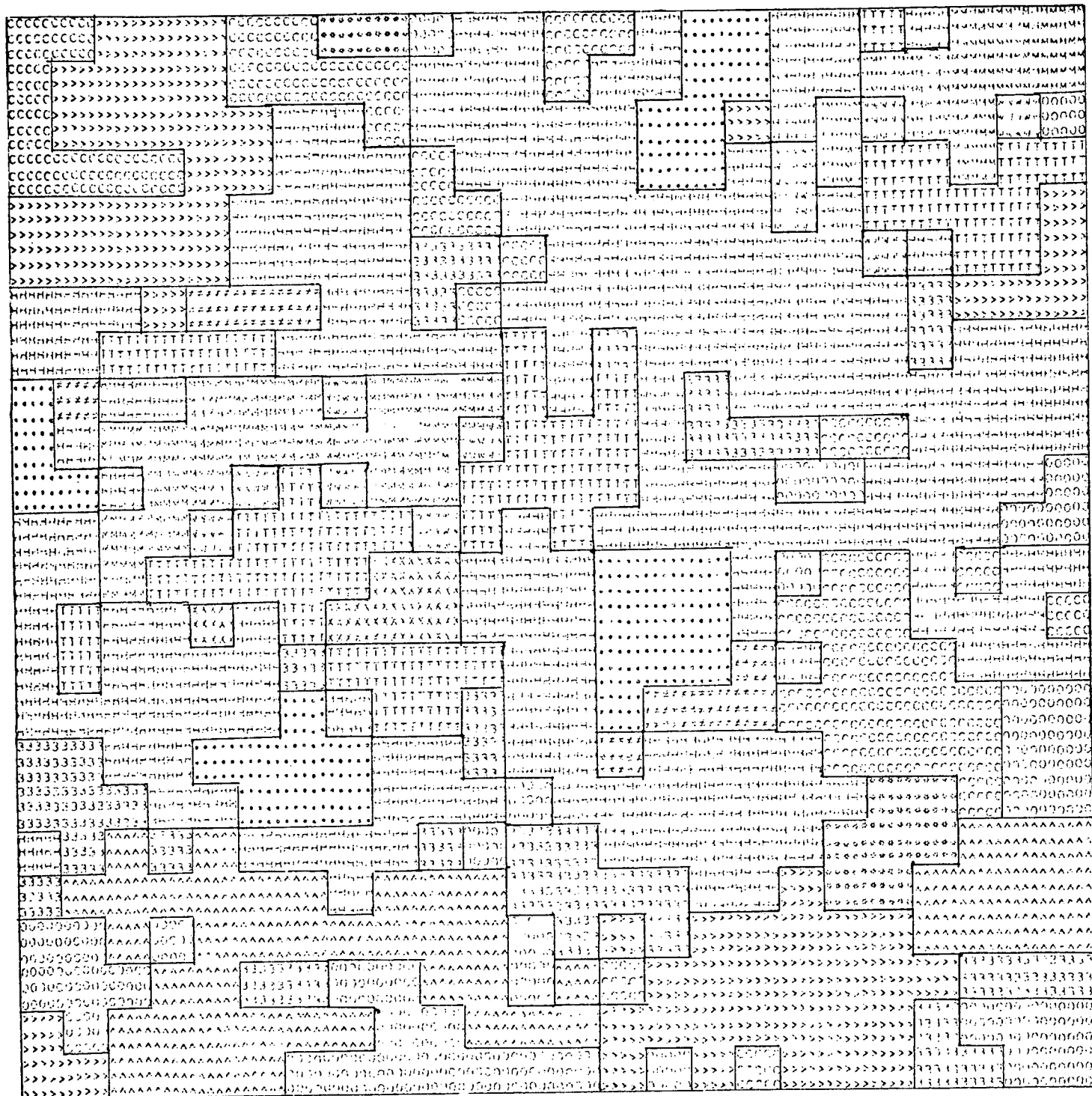
Meetings with DNR Assistant Commissioner, Mr. Archie Chelseth and Planning Administrator, Mr. Jerome Kuehn resulted in three subsequent meetings with DNR: Planning division personnel, the Planning and Environmental Review Team, and field personnel. As a result of this meeting we received a list of information needs from each division in DNR. Some lists were useful in helping to refine classification schemes while others focused only on what they thought ERTS-1 could be used for. We are currently trying to obtain new listings that go beyond how they think ERTS imagery could be used and encompass all their information needs.

- f. No technical reports or papers have been completed in this reporting time interval.
- g. On April 25 we requested extension of the data analysis phase through December 31, 1973. In subsequent telephone conversations with Mr. G. R. Stonesifer and Mr. R. D. Phillips the extension proposal was discussed and by early June Mr. Phillips confirmed approval by phone. He indicated a confirmation letter would follow some time in July. To date we have not received written confirmation but are assuming that the proposed extension is operational.
- h. No changes have been made in the standing order form.
- i. ERTS image description form is attached.
- j. Five data requests were filed on 7/11/73, 7/23/73, 8/7/73, 8/10/73 and 8/17/73.
- k. No budgetary changes are forseen at this time.
- l. No personnel changes have occurred.

Greenway Township Itasca County Minnesota

Land Use from ERTS-1

1972



LAND USE SYMBOLS

- Open/cultivated
- Wetlands
- Conifers
- CBD
- Mixed/conifers dom.
- Tailings piles
- Water filled pits

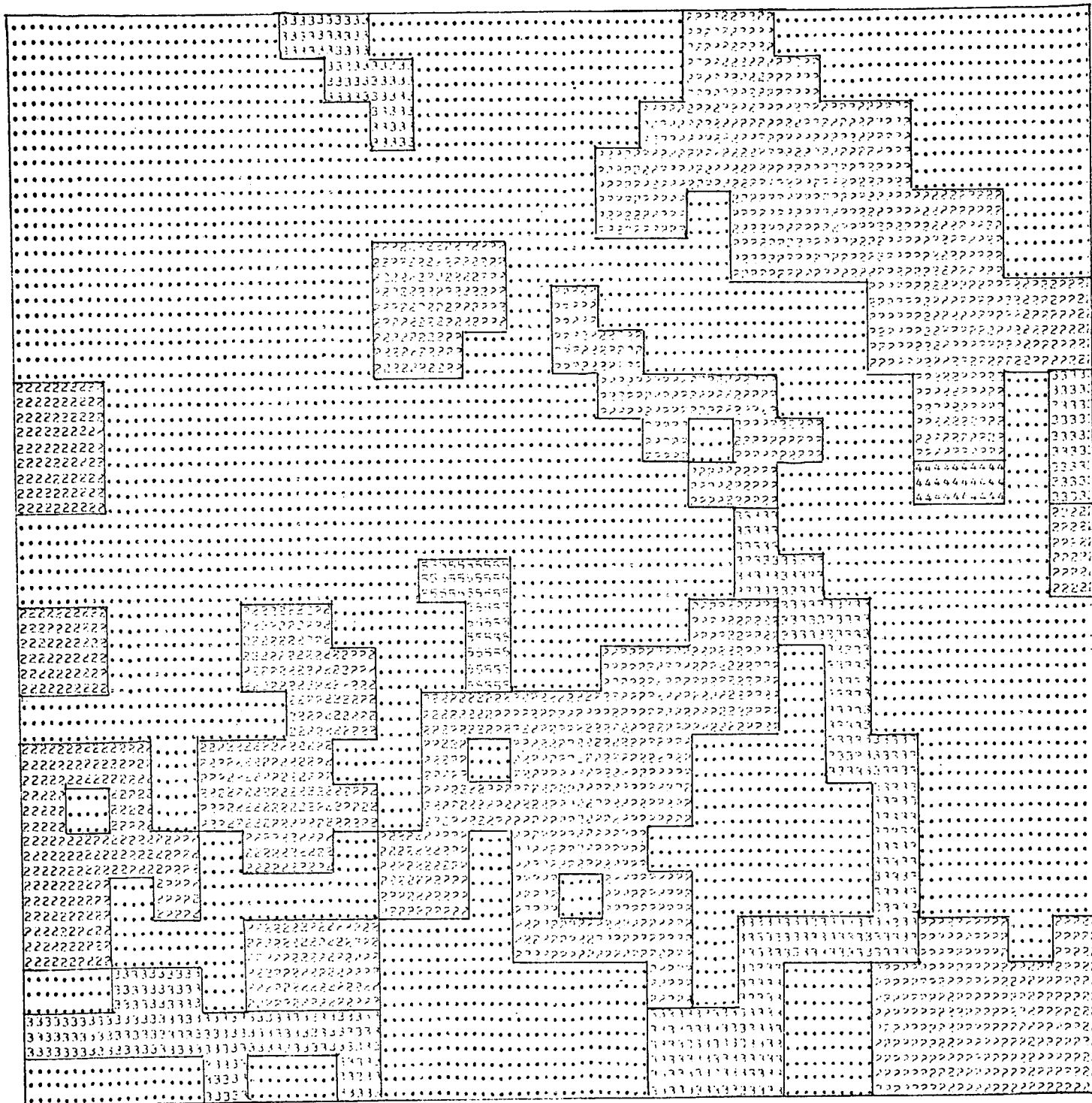
LAND USE SYMBOLS

- Water
- Hardwoods
- Urban
- Mixed/hardwoods dom.
- Mines
- Tailings basins
- Tailings ponds

Greenway Township Itasca County Minnesota

Water Orientation

1972



WATER ORIENTATION CODE

05000 OR
 11111
 22222
 33333
 44444
 55555

TYPE

0 WATER
 1 ISLAND
 2 TOUCHES WATER GREATER THAN 1/4 ACRES
 3 YEAR AROUND DIVER
 4 SEASONALLY DIVER
 5 DRAINAGE DITCH

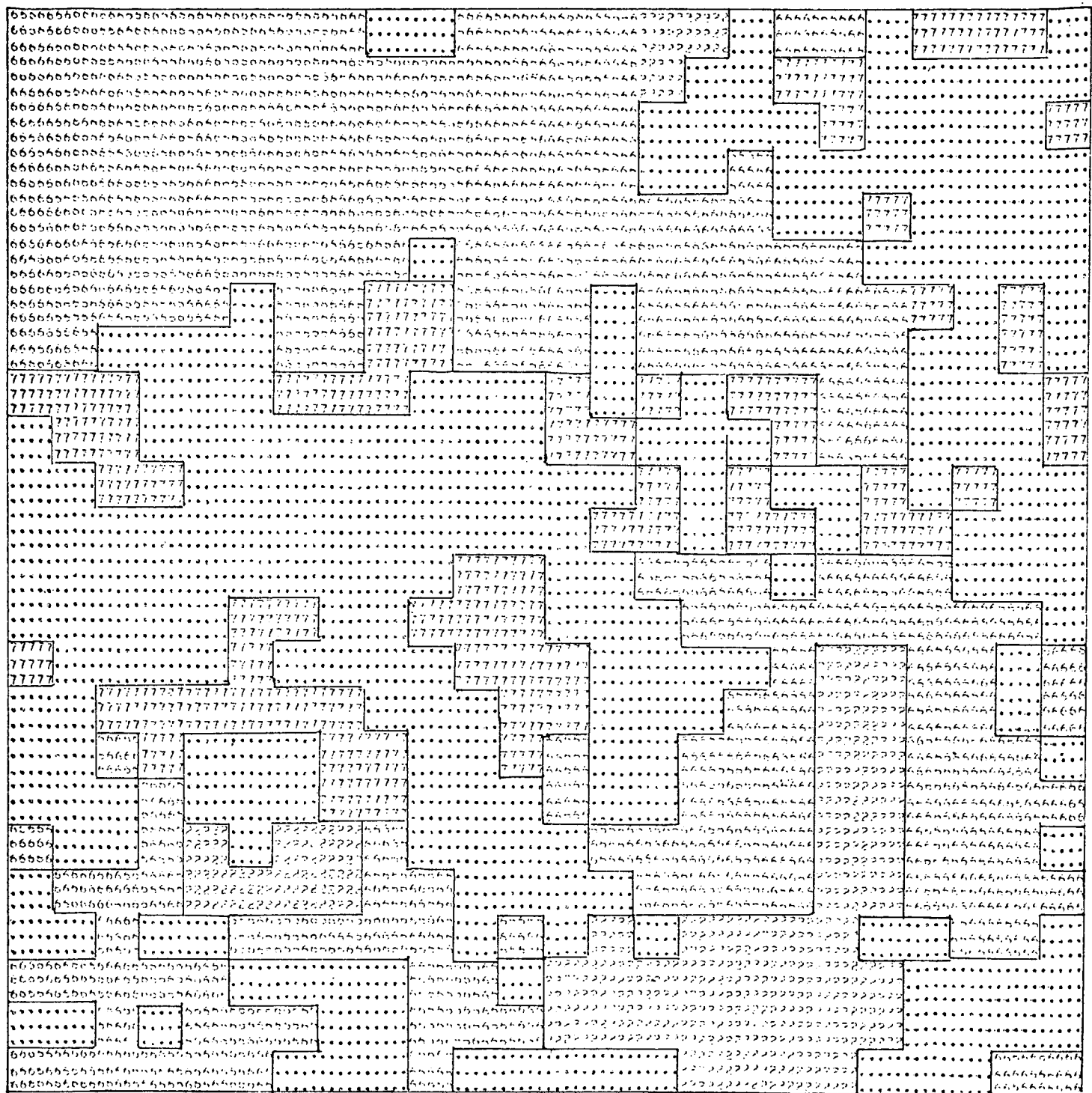
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2A
10NS

Greenway Township Itasca County Minnesota
Forest Types
1972

6 5 4 3 2 1

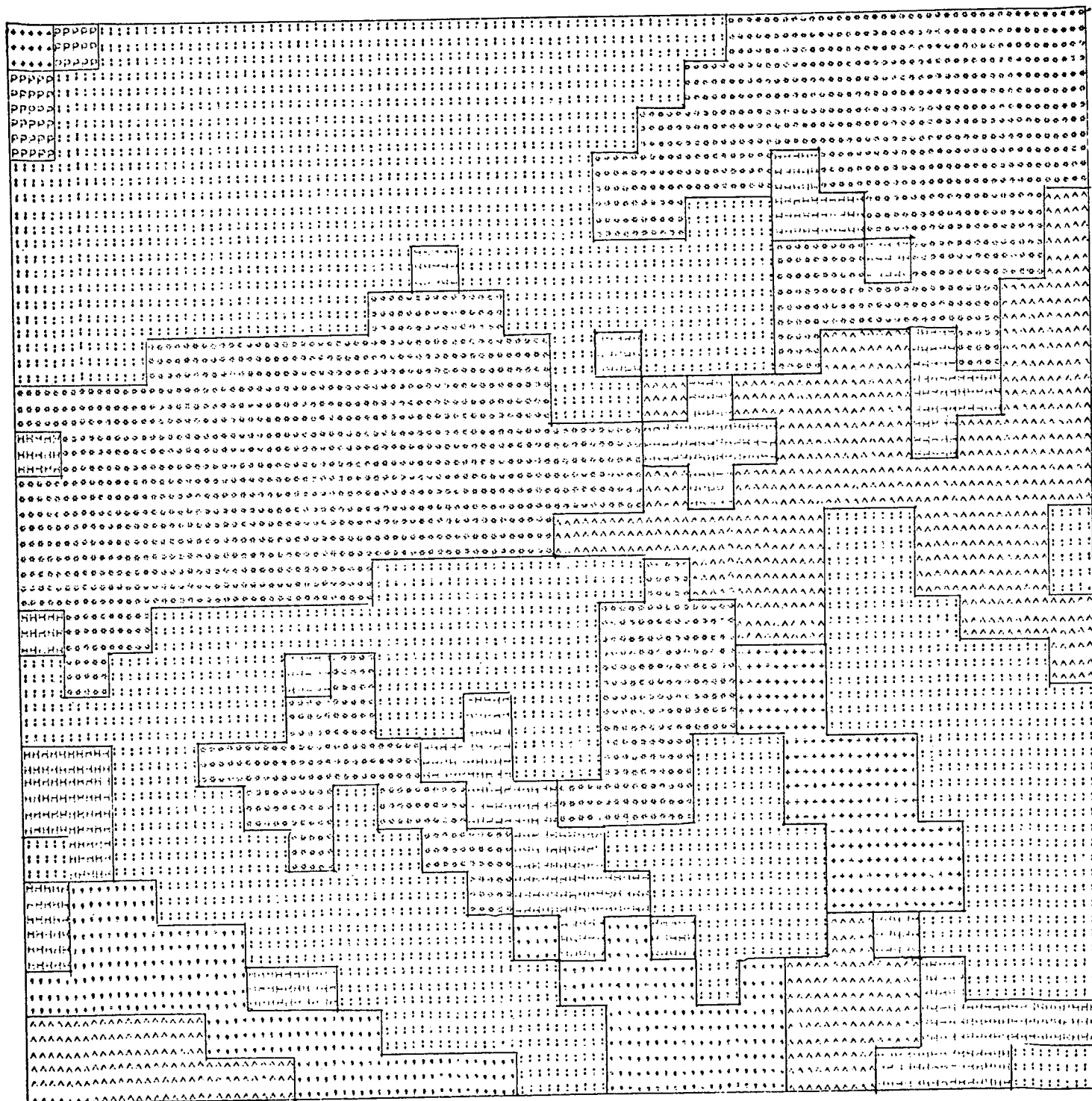


FOREST CODE

TYPE

- 11111 WHITE. PINE, JACK PINE
- 22222 SPOUSE PINE
- 33333 SUG. HICKORY
- 44444 RED. ASP. WHITE. OAK
- 55555 MAPLE, BIRCH, ASH, OAK
- 66666 ASPEN, BIRCH
- 77777 HARDWOOD MIX

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SOIL LANDSCAPE SYMBOL	CODE	SOIL LANDSCAPE SYMBOL	CODE
AA	SSOL	BB	SSOL
AB	SSOL	BC	SSOL
AY	SSOL	BD	SSOL
BB	SSOL	BE	SSOL
BC	SSOL	BF	SSOL
BD	SSOL	BG	SSOL
BE	SSOL	BH	SSOL
BF	SSOL	BI	SSOL
BG	SSOL	BJ	SSOL
BH	SSOL	BK	SSOL
BI	SSOL	BL	SSOL
BJ	SSOL	BM	SSOL
BK	SSOL	BN	SSOL
BL	SSOL	BO	SSOL
BM	SSOL	BP	SSOL
BN	SSOL	BQ	SSOL
BO	SSOL	BR	SSOL
BP	SSOL	BS	SSOL
BQ	SSOL	BT	SSOL
BR	SSOL	BU	SSOL
BS	SSOL	BV	SSOL
BT	SSOL	BW	SSOL
BU	SSOL	BX	SSOL
BV	SSOL	BY	SSOL
BW	SSOL	BZ	SSOL
BX	SSOL		
BY	SSOL		
BZ	SSOL		

ERTS IMAGE DESCRIPTOR FORM

(See Instructions on Back)

DATE September 6, 1973

PRINCIPAL INVESTIGATOR Sizer, Minn. - S.P.A.

GSFC _____

ORGANIZATION _____

NDPF USE ONLY

D _____

N _____

ID _____

PRODUCT ID (INCLUDE BAND AND PRODUCT)	FREQUENTLY USED DESCRIPTORS*			DESCRIPTORS
	water	wetlands		
1077-16431-5,6,7	x			West Central Minnesota
1311-16435-5,7	x			"
1329-16434-5,6,7	x			"
1347-16432-5,7	x			"
1076-16370-4,5,6		x		North Central Minnesota
1166-16373-4,5,6,7		x		"
1202-16375-4,5,6,7		x		"
1238-16380-4,5,6,7		x		"
1310-16374-4,5,6,7		x		"
1255-16331-4,5,6,7	all features			Twin Cities
1309-16325-4,5,6,7	all features			"
1345-16322-4,5,6,7	all features			"
1057-16311-5,6,7	all features			Itasca County
1165-16314-7	all features			"
1076-16370-5,6	all features			"
1166-16373-7	all features			"

*FOR DESCRIPTORS WHICH WILL OCCUR FREQUENTLY, WRITE THE DESCRIPTOR TERMS IN THESE COLUMN HEADING SPACES NOW AND USE A CHECK (✓) MARK IN THE APPROPRIATE PRODUCT ID LINES. (FOR OTHER DESCRIPTORS, WRITE THE TERM UNDER THE DESCRIPTORS COLUMN).

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